EFFECTIVE USE OF TECHNOLOGY WEBINAR SERIES

– Session 3 –
Beyond Infrastructure: Best Practices for Transformative Learning Enabled by Technology

Wednesday, July 1, 2020, 2:00-3:00 p.m. ET

Introduction to the Effective Use of Technology Webinar Series

Dig deeper into State coordinator (SC)-identified needs.

Engage with experts and peers.

Build capacity of SCs to support local education agencies (LEAs) addressing issues via Title IV, Part A.

Providing technical assistance (TA).

Reviewing and processing applications.

Supporting evaluation.

Beyond Infrastructure: Best Practices for Transformative Learning Enabled by Technology

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Senior Researcher
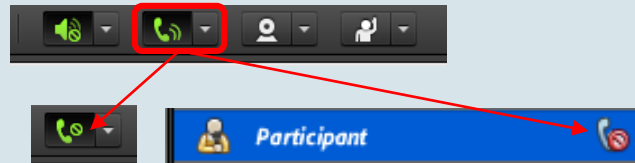T4PA Center
(Moderator and Speaker)

Janet Peters
Technical Assistance Specialist
Center on Inclusive Technology &
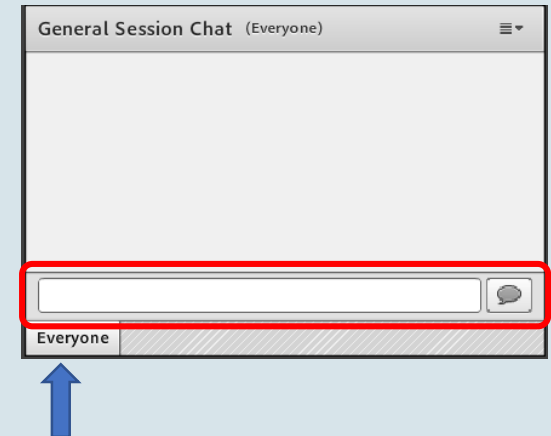Education Systems (CITES)
(Speaker)

Housekeeping

1. Raise hand/react.

2. Mute/unmute.

3. Chat.

Polling Question 1

What do you hope to get out of today's session?

Agenda

The need for support beyond device and infrastructure purchases to meet technology goals

The Substitution, Augmentation, Modification, and Redefinition (SAMR) Model and the role of effective technology implementation in improving outcomes for learning

How has technology changed, and how can we use it to redefine teaching and learning?

How can combining evidence-based practices with technology help us redefine learning?

Resources and next steps

Objectives

Understand	Understand the goals for effective technology use, and identify the supports needed by LEAs to achieve these goals.
Learn	Learn more about the SAMR Model and how effective technology implementation can lead to improved outcomes.
Explore	Explore game-changing technologies and their potential for improving learning outcomes.
Connect	Connect with information and resources to support your work with LEAs as they move toward effective technology use.

Polling Question 2
Group Discussion

How are your LEAs using their Title IV, Part A Effective Use of Technology funds for professional development (PD) and supplemental instruction?

What do you want to learn so you can better support your LEAs in using best practices for personalized, rigorous learning experiences supported by technology?

Setting the Context

The Need

Learning Goal – National Education Technology Plan

"All learners will have engaging and empowering learning experiences in both formal and informal settings that prepare them to be active, creative, knowledgeable, and ethical participants in our globally connected society."

https://tech.ed.gov/netp/learning

Teaching Goal – National Education Technology Plan

"Educators will be supported by technology that connects them to people, data, content, resources, expertise, and learning experiences that can empower and inspire them to provide more effective teaching for all learners."

https://tech.ed.gov/netp/teaching

What We've Heard From Title IV, Part A State Coordinators

- *"Technology is perhaps the most challenging of the three content areas for our grantees. As soon as we apply the special rule limiting infrastructure purchases, many of our grantees seem to have few ideas on how to effectively and/or creatively spend in this area."*

- *"What I am looking for is a deeper understanding as to what this means ... I feel like LEAs address the effective use of technology as an afterthought. What would be authentic staff development in this area? Staff attending conferences seems so inadequate."*

Additional Topics

Educator competencies – What do teachers need to know to use technology effectively?

Moving beyond the device and infrastructure purchases – What can be done?

Evaluating technology programs and best practices – What does best practice look like?

Districts Cite Similar Challenges …

46% of principals say that motivating teachers to change instructional practices to use technology tools is the primary obstacle to more effective technology use.

Source: Project Tomorrow® 2017 survey data: https://tomorrow.org/speakup/speakup2017-educational-equity-imperative-september2018.html

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… But Recognize Value in the Effective Use of Technology to Build Future Ready Students

Students in 1-to-1 technology implementations are more likely to

Believe they are doing well in school.	Feel they are learning important skills for their future.
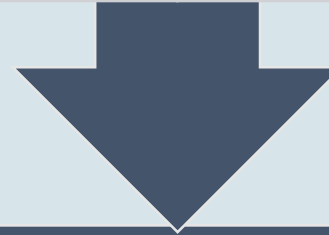
51% of teachers using interactive technologies such as animations and simulations report that these tools improve critical thinking and problem-solving skills.

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Project Tomorrow® Speak Up 2019-20 Research Findings

% of teachers who identified this need before school closures		% of teachers who identified this need because of school closures
50%	How to differentiate instruction	54%
38%	Integrating digital content within lessons	44%
35%	Using animations and simulations within lessons ✓	48%
35%	Using digital or online games	46%
29%	Implementing Google classroom	37%
27%	Creating my own videos for students to watch ✓	46%
27%	How to implement a blended learning model ✓	40%
25%	How to teach an online class ✓	36%
15%	Implementing a social emotional learning program ✓	31%

Making It Happen

Effective Technology Implementation to Get to Effective Use of Technology

Effective Use of Technology

Effective Innovations + **Effective Implementation** = **Positive Outcomes**

Districts that create a vision and set goals for technology implementation are more likely to be successful than those where implementation is driven by the sudden availability of funds.

Moving Up the SAMR Model

Substitution – Direct substitution of a technology tool for an existing task.

Augmentation – Substitution for an existing task with some improvements.

Modification – Redesign of an existing task.

Redefinition – Creation of a new task that was previously impossible.

Center on Inclusive Technology & Education Systems (CITES) Framework

Framing the Future of Learning with Technology

What works when bringing together education technology (EdTech), information technology (InfoTech) and assistive technology for students with disabilities (AT)? CITES, the Center on Inclusive Technology & Education Systems, is partnering with seven school districts from across the country to answer that question. What we learn will inform the development of the CITES Framework of evidence-based practices for creating and sustaining inclusive technology ecosystems in school districts.

The CITES Framework will be based on principles under the five practices of the **National Education Technology Plan** ☑ (NETP).

Learning >	Teaching >	Leadership >	Assessment >	Infrastructure >
Engaging & empowering learning through technology	Teaching with technology	Creating a culture and conditions for innovation and change	Measuring learning	Enabling access and effective use

National Education Technology Plan: https://tech.ed.gov/netp

Polling Question 3
Group Discussion

Many LEAs have been successful at getting devices into the classroom, but struggle to move from access and adoption to innovation. Why?

Where do you see LEAs in your state in this process? What do they still need to help them move forward?

Redefining Learning With Technology

What Does Redefinition Look Like?

Think About …

The types of technology students (and you!) were using 10 years ago …
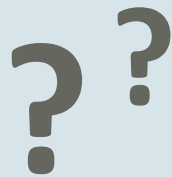
What is possible now that wasn't possible then? What might be possible in the next 5 years?

Game Changers

- Smaller and less expensive hardware

- Cheaper and smaller power sources

- Faster Internet and broadband capabilities

- User interfaces and input options

- Open source and community development of technologies

- Access to creation tools

Getting to Effective Use of Technology

Combining Innovative Tools With Evidence-Based Practices to Improve Learning Outcomes

Improved Outcomes Aren't So Simple …

Technology Tool **+** **Student Use** **=** Improved Reading Achievement
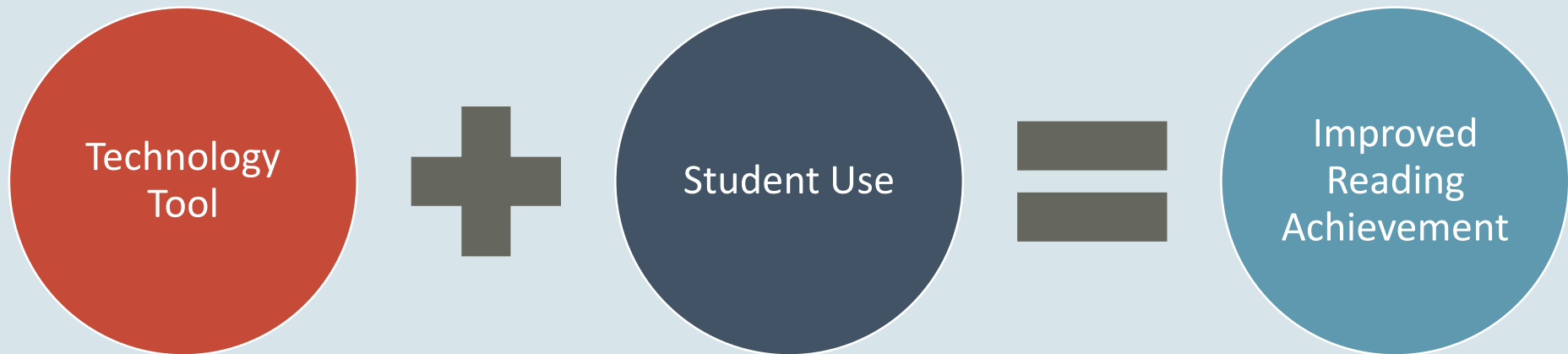
Multiple Factors to Improve Outcomes

Classroom Integration

Access to Technology

PD and Student Training

Increased Student Achievement

What Does It Take?

Technology

Universal Design for Learning

Evidence-Based Strategies

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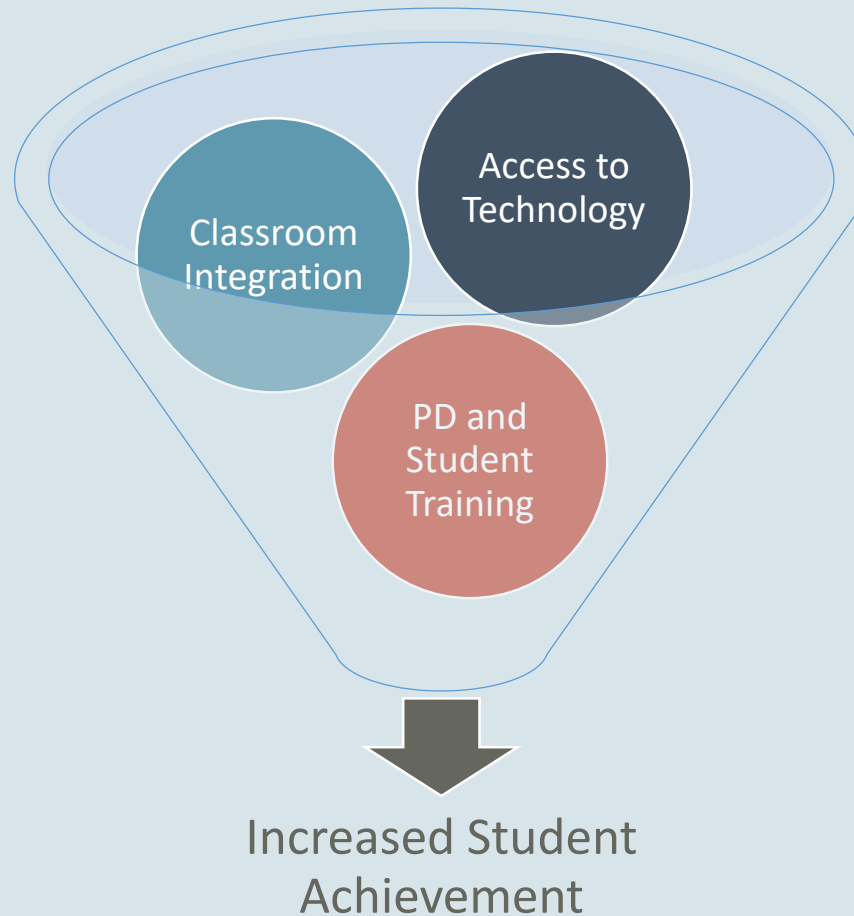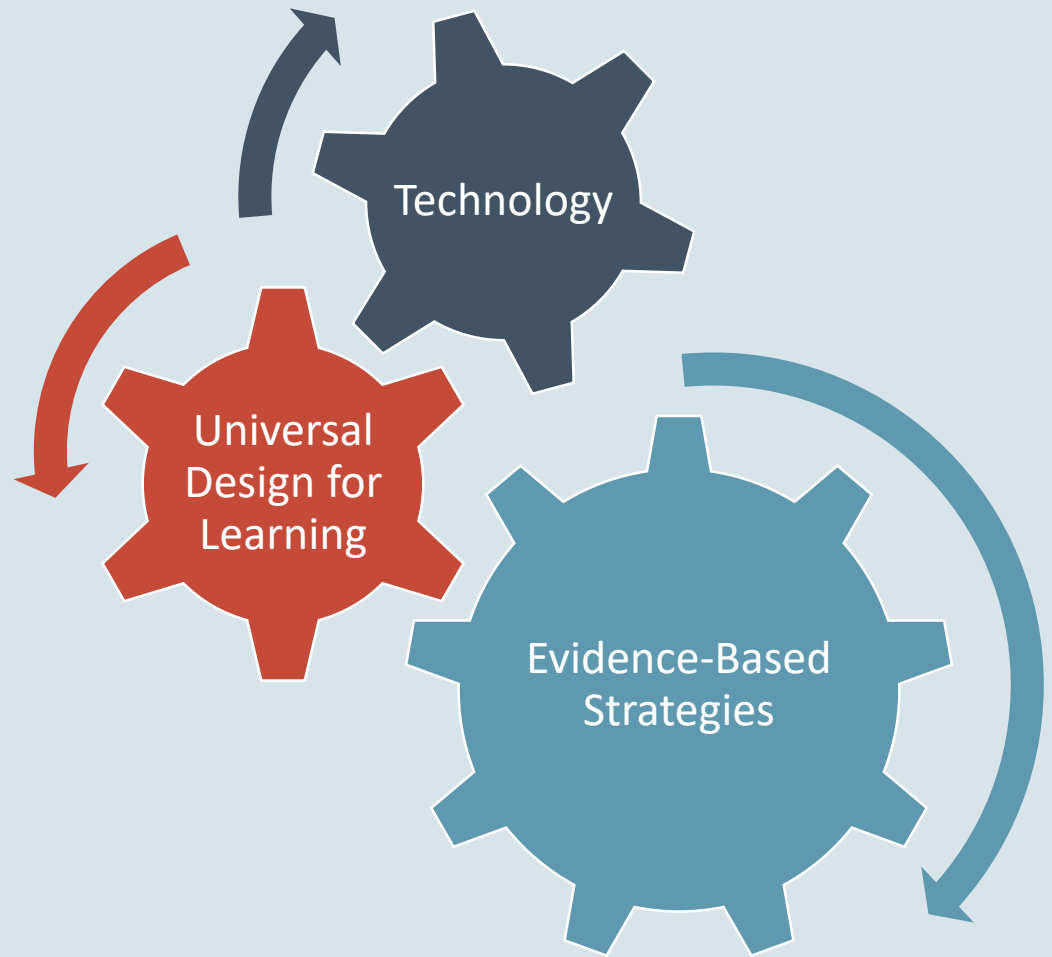
Best Practices

Plan instruction that considers students' readiness, learning needs, and interests.

Use a range of technology tools to engage learners at varying levels.

Use a range of technology tools to engage learners in multiple ways.

Use a range of technology tools to offer students options for demonstrating mastery.

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Closer Look: Social Studies Instruction

- Thinking like a historian
  - Students must be able to evaluate, corroborate, and synthesize multiple conflicting sources
  - Primary and secondary sources require background knowledge, vocabulary, and comprehension strategies different from those used in other classes

- Students who struggle (students with disabilities, English learners) are often offered reduced number and type of sources

Example of Evidence-Based Practice: Visualizing

Visualizing Across Content Areas

Reading fiction: It can help Students "see" the characters, their actions, and the environments in which they live.
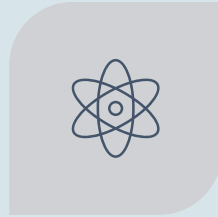
Science texts: It can help students understand the procedures in an experiment.

Math problems: It can help students follow the steps in a word problem.

Social studies texts: It can help students understand the setting of an event or time period, and it can give students insight into the lives of historical figures.

Visualizing in a Virtual Reality Environment

Virtual Reality in the UDL Framework

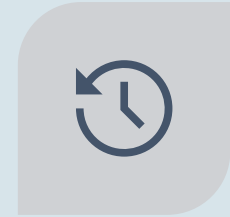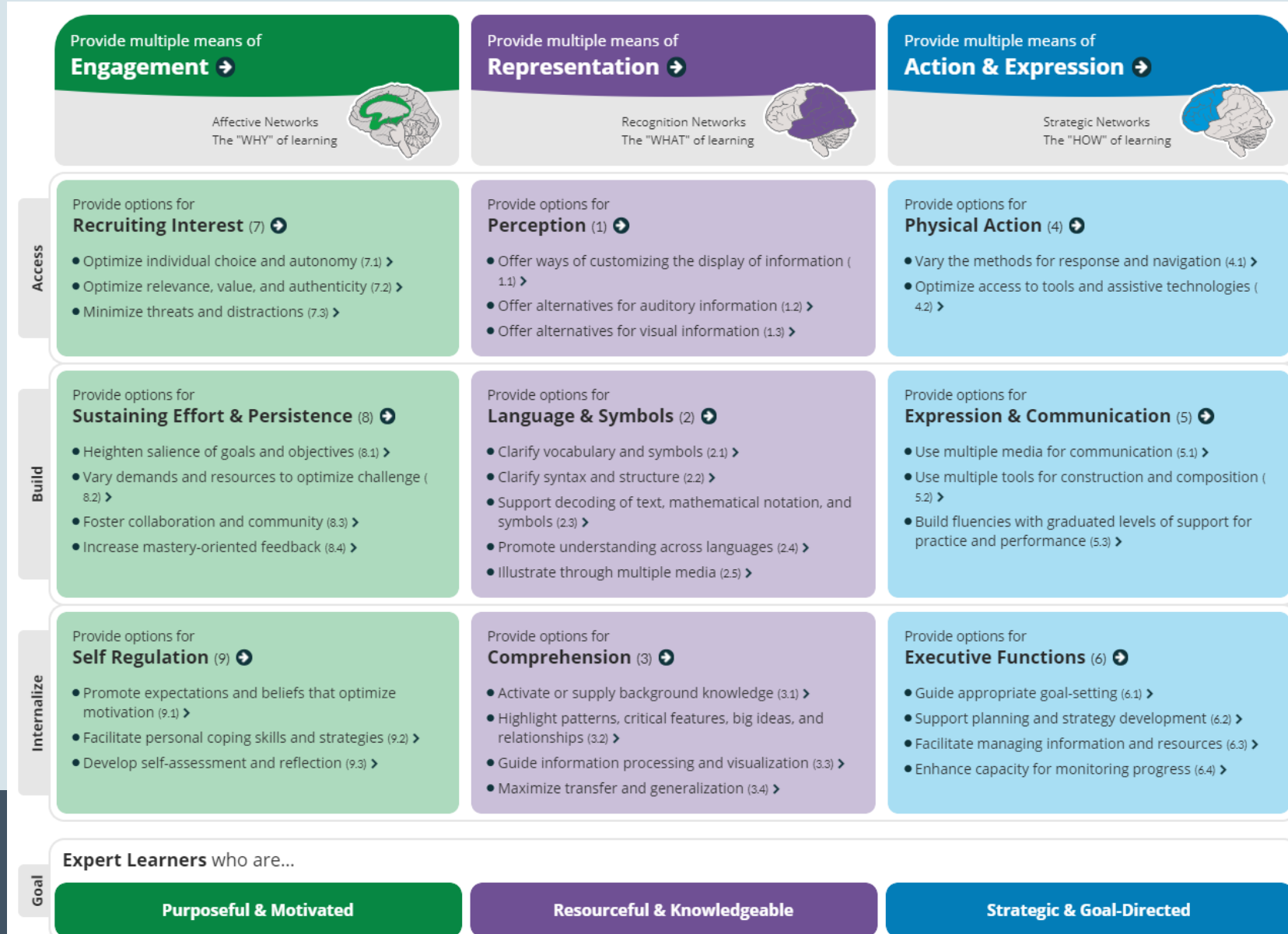| Provide multiple means of **Engagement** ➔	Provide multiple means of **Representation** ➔	Provide multiple means of **Action & Expression** ➔
Affective Networks The "WHY" of learning	Recognition Networks The "WHAT" of learning	Strategic Networks The "HOW" of learning
Access — Provide options for **Recruiting Interest** (7) ➔ • Optimize individual choice and autonomy (7.1) › • Optimize relevance, value, and authenticity (7.2) › • Minimize threats and distractions (7.3) ›	Provide options for **Perception** (1) ➔ • Offer ways of customizing the display of information (1.1) › • Offer alternatives for auditory information (1.2) › • Offer alternatives for visual information (1.3) ›	Provide options for **Physical Action** (4) ➔ • Vary the methods for response and navigation (4.1) › • Optimize access to tools and assistive technologies (4.2) ›
Build — Provide options for **Sustaining Effort & Persistence** (8) ➔ • Heighten salience of goals and objectives (8.1) › • Vary demands and resources to optimize challenge (8.2) › • Foster collaboration and community (8.3) › • Increase mastery-oriented feedback (8.4) ›	Provide options for **Language & Symbols** (2) ➔ • Clarify vocabulary and symbols (2.1) › • Clarify syntax and structure (2.2) › • Support decoding of text, mathematical notation, and symbols (2.3) › • Promote understanding across languages (2.4) › • Illustrate through multiple media (2.5) ›	Provide options for **Expression & Communication** (5) ➔ • Use multiple media for communication (5.1) › • Use multiple tools for construction and composition (5.2) › • Build fluencies with graduated levels of support for practice and performance (5.3) ›
Internalize — Provide options for **Self Regulation** (9) ➔ • Promote expectations and beliefs that optimize motivation (9.1) › • Facilitate personal coping skills and strategies (9.2) › • Develop self-assessment and reflection (9.3) ›	Provide options for **Comprehension** (3) ➔ • Activate or supply background knowledge (3.1) › • Highlight patterns, critical features, big ideas, and relationships (3.2) › • Guide information processing and visualization (3.3) › • Maximize transfer and generalization (3.4) ›	Provide options for **Executive Functions** (6) ➔ • Guide appropriate goal-setting (6.1) › • Support planning and strategy development (6.2) › • Facilitate managing information and resources (6.3) › • Enhance capacity for monitoring progress (6.4) ›

Expert Learners who are…

Goal	**Purposeful & Motivated**	**Resourceful & Knowledgeable**	**Strategic & Goal-Directed**

When Reviewing LEA Applications and/or Providing TA...

Look For:

- Explicit connections between LEA needs assessment and LEA technology purchases, integrations, implementation, PD to curriculum, learning goals, evidence-based practices.

Ask:

- How does it connect to learning?
- How does it connect to the districtwide vision for technology? For learning?
- How does it allow districts to address learner needs and goals?
- How does PD help support teachers in making these connections and moving away from how-to to transformative teaching and learning?

Questions and Answers

Wrap-Up and Next Steps

What Comes Next?

- Next session:

  - **Sustaining Quality Professional Learning in the Shift to Virtual**

  - **July 14, 2020, 1:30 – 2:30 p.m. ET**

- Contribute your state's promising examples, products, and resources to the Practitioner's Toolbox: https://t4pacenter.ed.gov/Resources/PractitionersToolbox.aspx.

- Explore the T4PA Center resources page: https://t4pacenter.ed.gov/Resources/ResourceLibrary.aspx

- Join the discussion in the Portal.

Suggested Resources

- Center on Inclusive Technology and Education Systems (CITES): http://cites.cast.org/

- PowerUp WHAT WORKS (Center on Technology Implementation): https://powerupwhatworks.org/

- Office of Educational Technology – Professional Learning: https://tech.ed.gov/professional-learning/

Suggested Resources (continued)

- Future Ready: https://tech.ed.gov/futureready/

- Dear Colleague Letter – Federal Funding for Technology: https://tech.ed.gov/files/2017/01/2017.1.18-Tech-Federal-Funds-Final-V4.pdf

Close

Thank you for joining us today!

If you have any questions or need assistance in addressing effective use of technology issues in your state, reach out to your liaison.